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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,437	03/12/2004	Jorg-Reinhardt Kropp	16274.9a.1	6223
22913	7590	06/08/2006	EXAMINER CHIAM, DINH D	
WORKMAN NYDEGGER (F/K/A WORKMAN NYDEGGER & SEELEY) 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111			ART UNIT 2883	PAPER NUMBER

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

★

**Office Action Summary**

Application No.

10/799,437

Applicant(s)

KROPP, JORG-REINHARDT

Examiner

Erin D. Chiem

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 and 15-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-25 is/are rejected.
- 7) ☒ Claim(s) 1-13, 15-25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This office action is in response to applicant's amendment filed on March 15, 2006.

Upon further consideration, examiner finds applicant's arguments persuasive; therefore, a new rejection is set forth hereinafter.

#### *Claim Objections*

Claims 1-13, and 15-25 are objected to because of the following informalities: the preamble *—an arrangement—* is unclear whether it be an arrangement of steps, and arrangement of abstract ideas, or an arrangement of elements to which it forms a device. Please see the attached definition found on [www.webster.com](http://www.webster.com) in which defines the word "arrangement" as being either a *method* or a *device*. Appropriate correction is required.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13, 15, 18-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nosu (US 4,244,045 Nosu hereinafter) in view of Yamauchi (US 7,038,778 B2 Yamauchi hereinafter).

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Regarding claims 1-2, 23, and 24 Nosu teaches an optical multiplexer and demultiplexer for multiplexing or demultiplexing optical signals having a plurality of wavelengths, the arrangement comprising a multiplex body (Fig. 12) having first and second parallel surfaces (60) between which light is reflected back and forth and coupled in or out in a wavelength dependent manner (please follow the arrows designating the directionality of light), a plurality of subassemblies (41-45), each subassembly comprising an optoelectronic transducer (Fig. 9; 131-135 and col. 5, lines 29-31) and an associated optical system that includes a lens attached to the substrate (140).

Regarding claim 3, each subassembly is mechanically connected to the multiplex body, they are mechanically adhering to the body during manufacturing.

Regarding claims 4-9, Nosu teaches providing means to place the subassemblies at an angular orientation with respect to the second surface of the multiplex body (81-86). These spacers are prisms, which further provide optical functionality to the arrangement. The second surface on which the prisms are placed upon are glass plates (31-36).

Regarding claims 10-14, Nosu provided thin film bandpass filters (11-16) placed on glass plates (21-26), these bandpass filters reflect non-centered wavelengths (col. 6, line 67 to col. 7, line 2).

Regarding claim 15, elements 41-46 are graded index rod lens for collimating the optical signals from the fibers.

Regarding claims 18-22, the subassemblies are structurally identical designed for reception and transmission, furthermore, the subassemblies taught by Nosu allow the device to operate as a demultiplexer and a multiplexer due to the bi-directionality of the optical paths.

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However, Nosu does not teach the optoelectronic transducer is supported by a substrate that includes a lens attached to the substrate.

Yamauchi discloses an optical transducer mounted on a substrate (15) that includes a lens attached to the substrate (11):

It would have been obvious to one having ordinary skill in the art to recognize the device would be more usable when housed on a substrate that can be easily handled. Furthermore, it would have been obvious to one having ordinary skill in the art to recognize a need for a lens to condense the optical source into the transducer for the optical signal to be efficiently coupled into the transducer. **The motivation** for providing a substrate is for better handling and the **motivation** for having a lens attached to the housing is to collimate light from the source integrated in the housing into the transducer as clearly shown by Yamauchi.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nosu in view of Sasaki et al. (US 5,960,141).

Nosu teaches the invention of claim 1, however, Nosu does not teach the electronic transducer is mounted on a leadframe where in each assembly are at least partially encapsulated with a potting compound.

Sasaki discloses a leadframe that provides at least partially encapsulated potting compound to insulate the component mounted thereon (col. 7-8, lines 58-15) for the purpose of maintain an operational temperature for the device.

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It would have been obvious at the time the invention to provide an insulating substrate to house the component and the motivation to insulate the component on the substrate is to protect the devices from overheating.

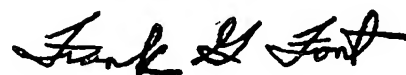
*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin D. Chiem whose telephone number is (571) 272-3102. The examiner can normally be reached on Monday - Thursday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erin D Chiem  
Examiner  
Art Unit 2883



Frank G. Font  
Supervisory Primary Examiner  
Technology Center 2800